ORIGINAL RESEARCH

Profile of Extra - Pulmonary Tuberculosis in a Tertiary Care Centre

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Abstract
Background: This study was conducted to assess the Profile of Extra - Pulmonary Tuberculosis in a Tertiary Care Centre.
Material and methods:Patients of all ages who had been diagnosed with EPTB were included in this record-based retrospective analysis. All EPTB instances diagnosed in a row were catalogued and studied. Following the RNTCP programme standards, one culture positive specimen from an extrapulmonary location or histological evidence by either CBNAAT or biopsy was required to establish the diagnosis of Extrapulmonary TB. This study comprised people of both sexes who were diagnosed with Extra - pulmonary tuberculosis. Patients who were diagnosed with pulmonary tuberculosis were not included in the analysis.
Results:Forty (40%) of the 100 people diagnosed with tuberculosis had extrapulmonary tuberculosis. Males are seven times as likely to be afflicted as females. Women were more likely than men to get tuberculosis of the lymph nodes, the brain, or the bones and joints. The socio-economic impact of extrapulmonary tuberculosis is shown by the fact that about 31 percent of cases occurred in the prime working years of people aged 30 to 50.
Conclusion:EPTB disproportionately affects the working-age population. The need of bolstering services for this vulnerable group is highlighted by the fact that distinct forms of EPTB cases occur in different age groups and sexes without a falling trend.
Keywords: tuberculosis, diabetes, prevalence.

Introduction

The two types of clinical manifestation of tuberculosis (TB) are pulmonary TB (PTB) and extrapulmonary TB (EPTB). The former is most common. EPTB refers to TB involving organs other than the lungs (e.g., pleura, lymph nodes, abdomen, genitourinary tract, skin, joints and bones, or meninges). A patient with both pulmonary and EPTB is classified as a case of PTB. For example, miliary TB is classified as PTB because there are lesions in the lungs. On the other hand, tuberculous intrathoracic lymphadenitis (mediastinal and/or hilar) or tuberculous pleural effusion, without radiographic abnormalities in the lungs, constitutes a case of EPTB.[1] A definitive diagnosis of TB can only be made by culturing Mycobacterium tuberculosis organisms from a specimen obtained from the patient. However, diagnosing EPTB remains challenging because clinical samples obtained from relatively inaccessible sites may be paucibacillary, decreasing the sensitivity of diagnostic tests. Since the conventional smear microscopy has a low sensitivity with a range of 0%-40%, negative results cannot exclude the presence of TB4. The reported yields of mycobacterial culture vary from 30% up to 80%, but it usually takes 2-8 weeks to receive the results, which is too slow to help treatment decisions.[2] About 10%-50% of EPTB patients have concomitant pulmonary involvement. Therefore, all suspected cases of EPTB should be assessed for concomitant PTB to determine whether the case is infectious and to assist with diagnosis. Some EPTB patients have positive sputum culture results despite normal chest radiography findings.[3] The sensitivity of sputum culture varied in previous studies by site of EPTB: 28%-50% for abdominal TB, 10%-11% for tuberculous pericarditis, 24%-29% for tuberculous meningitis, and 5%-14% for tuberculous lymphadenitis. Bronchoscopic evaluation or sputum induction with nebulized hypertonic saline can increase diagnostic sensitivity.[4,5] In one prospective study of patients with suspected pleural TB, the yield of sputum culture in induced samples approached 52%. Hence, this study was conducted to assess the

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Material and methods

Patients of all ages who had been diagnosed with EPTB were included in this record-based retrospective analysis. All EPTB instances diagnosed in a row were catalogued and studied. Following the RNTCP programme standards, one culture positive specimen from an extrapulmonary location or histological evidence by either CBNAAT or biopsy was required to establish the diagnosis of Extrapulmonary TB. This study comprised people of both sexes who were diagnosed with Extra - pulmonary tuberculosis. Patients who were diagnosed with pulmonary tuberculosis were not included in the analysis.

Results

Table 1: Distribution of tuberculosis.

Tuberculosis	Number of subjects
Pulmonary TB	60
Extrapulmonary TB	40
Total	100

40 out of 100 subjects had extra-pulmonary tuberculosis.

Table 2: Gender-wise distribution of subjects.

Gender	Number of subjects
Males	70
Females	30
Total	100

There were 70 males and 30 females in this study.

Table 3: Site of involvement of extrapulmonary tuberculosis.

Site of involvement	Number of subjects
Pleura	20
Lymph nodes	41
Bone	32
Abdomen	02
CNS	02
Breast	01
Kidney	01
Skin	01

The manifestations of extrapulmonary tuberculosis vary with the affected tissues. Cervical lymph node enlargement was the most common symptom of tuberculosis, while fever, nonproductive cough, and pleuritic chest pain characterized pleural TB. Persistent headache was a common symptom of CNS TB patients. Back pain or stiffness was the most prevalent symptom reported by patients with skeletal TB. Abdominal TB patients often complained of fullness, discomfort, and changes in bowel habits. Forty (40%) of the 100 people diagnosed with tuberculosis had extrapulmonary tuberculosis. Males are seven times as likely to be afflicted as females. Women were more likely than men to get tuberculosis of the lymph nodes, the brain, or the bones and joints. The socio-economic impact of extrapulmonary tuberculosis is shown by the fact that about 31 percent of cases occurred in the prime working years of people aged 30 to 50.

Discussion

Approximately 15–25% of TB infections involve extrapulmonary sites and cause EPTB through haematogenous and lymphatic dissemination of M. tuberculosis dissemination.[6] Pleural, lymphatic and musculoskeletal TBs are among the most common sites of EPTB.[7] Clinical signs and symptoms of EPTB vary largely with the affected organ, the disease aggressiveness and the host immune response, and its imaging representations may be vague.[8] According to different EPTB locations and drug resistance, the treatment regimen may need to be adapted, such as elongating treatment time to 9–12 months for CNS and skeletal TB, and addition of steroids for meningeal and pericardial TB.[9] Surgical treatment plays a role in establishing the diagnosis of EPTB and the management of relevant complicated complications.[10] China has the third highest number of TB cases following India and Indonesia, accounting for 8.4% of global TB cases.[11] Hence, this study was conducted to assess the Profile of Extra - Pulmonary Tuberculosis in a Tertiary Care Centre. In this study, the manifestations of extrapulmonary tuberculosis varied with the affected tissues. Cervical lymph node enlargement was the most common symptom of tuberculosis, while fever, nonproductive cough, and

pleuritic chest pain characterized pleural TB. Persistent headache was a common symptom of CNS TB patients. Back pain or stiffness was the most prevalent symptom reported by patients with skeletal TB. Abdominal TB patients often complained of fullness, discomfort, and changes in bowel habits. Forty (40%) of the 100 people diagnosed with tuberculosis had extrapulmonary tuberculosis. Males are seven times as likely to be afflicted as females. Women were more likely than men to get tuberculosis of the lymph nodes, the brain, or the bones and joints. The socio-economic impact of extrapulmonary tuberculosis is shown by the fact that about 31 percent of cases occurred in the prime working years of people aged 30 to 50. Eddabra R et al[12] described the epidemiological profile among tuberculosis patients in Laayoune, Morocco. A retrospective study was conducted among tuberculosis patients (having extrapulmonary tuberculosis and pulmonary tuberculosis), registered in the diagnosis of tuberculosis and respiratory diseases reference center of Laayoune, between January 2017 and May 2018. Demographic characteristics, clinical presentation of TB and apparent risk factors of the disease were obtained from the medical case records of all patients. During the study period, a total of 211 patients (125 males and 86 females) with tuberculosis were enrolled. The majority of cases (93.40%) were newly diagnosed and the segment with the pulmonary tuberculosis was 63.50%. The highest disease burden was found in the ≥15 year age group (92.40%; p=0.022). Men were more frequently affected by pulmonary tuberculosis (70.90%), while extrapulmonary tuberculosis was more commonly detected in women (61%) (p<0.0001). The most common sites of extrapulmonary disease were lymphatic (32.47%), pleural (16.88%) and spinal tuberculosis (15.58%). HIV infection and smoking seem to be the most important risk factors that affect host defense against TB infection. The results obtained in tuberculosis patients in Laayoune, Morocco, showed that active tuberculosis was associated with risk factors such as sex, age and smoking.

Conclusion

EPTB disproportionately affects the working-age population. The need of bolstering services for this vulnerable group is highlighted by the fact that distinct forms of EPTB cases occur in different agegroups and sexes withoutafallingtrend.

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